

# **AKAI SERVICE MANUAL**



**SEMI AUTOMATIC TURNTABLE**

**MODEL AP-A510/C**

**MODEL AP-A305/C**

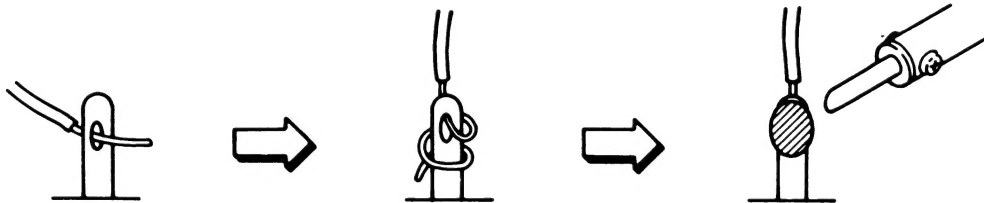
# SAFETY INSTRUCTIONS

## SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for **C** or **A**, specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone line-in-out jacks etc.)

## PRECAUTIONS DURING SERVICING

1. Parts identified by the  $\triangle$  symbol parts are critical for safety.  
Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.  
Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
  - 1) Wires covered with PVC tubing
  - 2) Double insulated wires
  - 3) High voltage leads
4. Use specified unsulating materials for hazardous live parts. Note especially:
  - 1) Insulation Tape
  - 2) PVC tubing
  - 3) Spacers (Insulating Barriers)
  - 4) Insulation sheets for transistors
  - 5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

## VOLTAGE CONVERSION (AP-A305/C only)

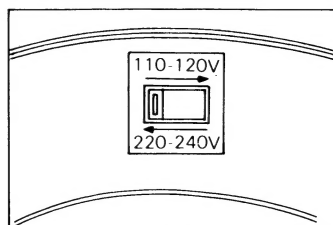
Each machine is preset at factory according to its destination, but some machines can be set to 110V-120V or 220V-240V as required.

If your machine's voltage can be converted:



Before connecting the power cord or assembling the platter turn the Voltage Selector located on the top of the cabinet with a screwdriver until the correct voltage is indicated.

Models for USA, Canada, Europe, UK and Sustralia are not equipped with this facility.

**NOTE:** Cycle conversion is unnecessary since AP-A510/C use a DC motors.



## I. SPECIFICATIONS

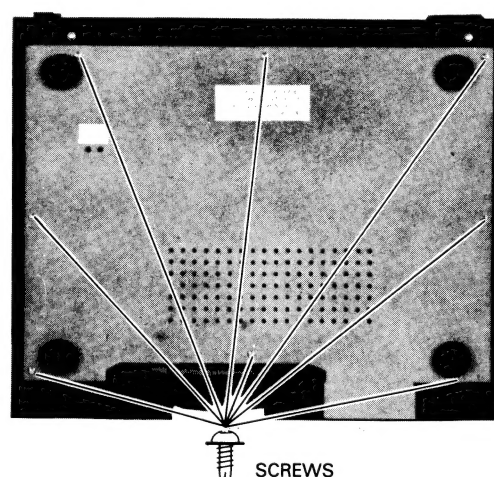
	MODEL AP-A305/C	MODEL AP-A510/C
MOTOR	DC E.G MOTOR	DC E.G MOTOR
SPEED	33-1/3 & 45 rpm	33-1/3 & 45 rpm
WOW & FLUTTER	0.09% (WRMS)	0.09% (WRMS)
RUMBLE	60dB (DIN-B)	60 dB(DIN-B)
CARTRIDGE PC-35 OUTPUT VOLTAGE CHANNEL SEPARATION CHANNEL BALANCE	Moving Magnet Type (  Type) 4mV 20dB Less than 2dB	Moving Magnet Type (  Type) 4mV 20dB Less than 2dB
EFFECTIVE ARM LENGTH	90mm	90mm
POWER REQUIREMENTS	120V, 60Hz for USA & Canada 220V, 50Hz for Europe 240V, 50Hz for UK & Australia 110V/120V-220V/240V, 50/60Hz Convertible for other countries	DC13V
DIMENSIONS	425(W) × 105(H) × 345(D)mm 16.7(W) × 3.9(H) × 13.6(D) Inches	425(W) × 105(H) × 345(D)mm 16.7(W) × 3.9(H) × 13.6(D) Inches
WEIGHT	4 Kg	3.8 Kg

\* For improvement purposes, specifications and design are subject to change without notice.

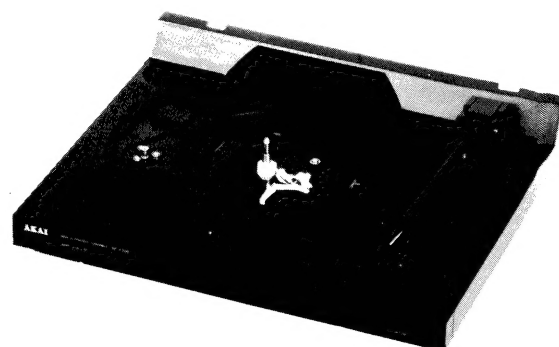
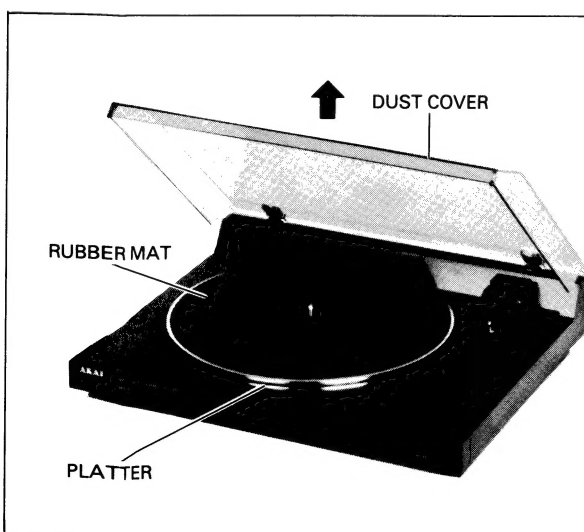
## II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

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### III. CONTROLS

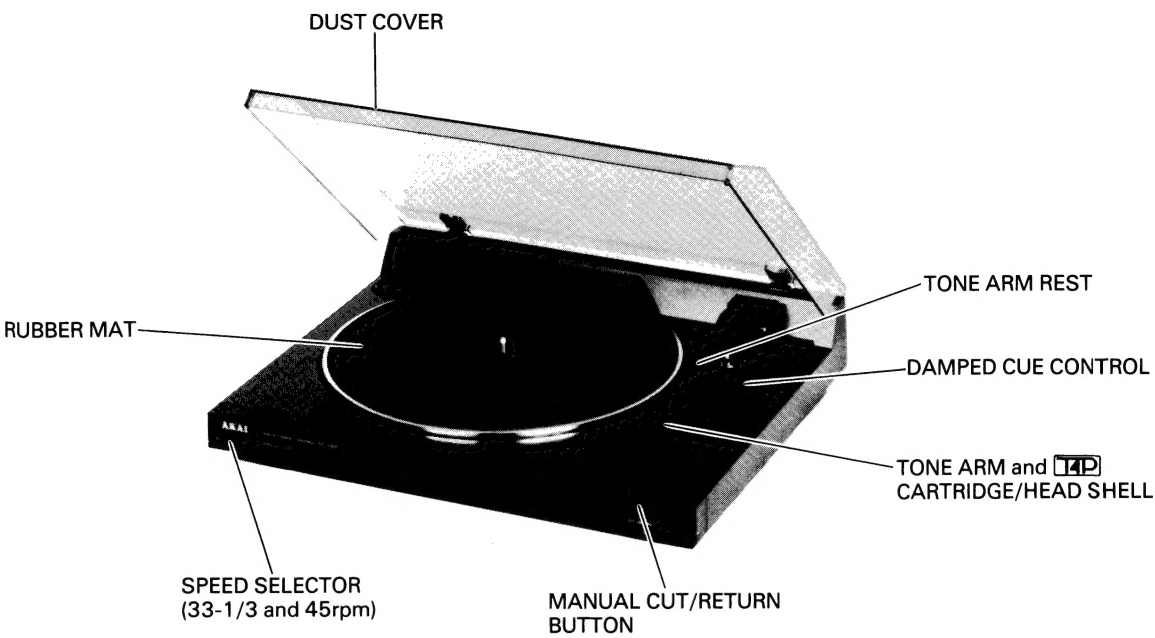


Fig. 3-1

### IV. PRINCIPAL PARTS LOCATION

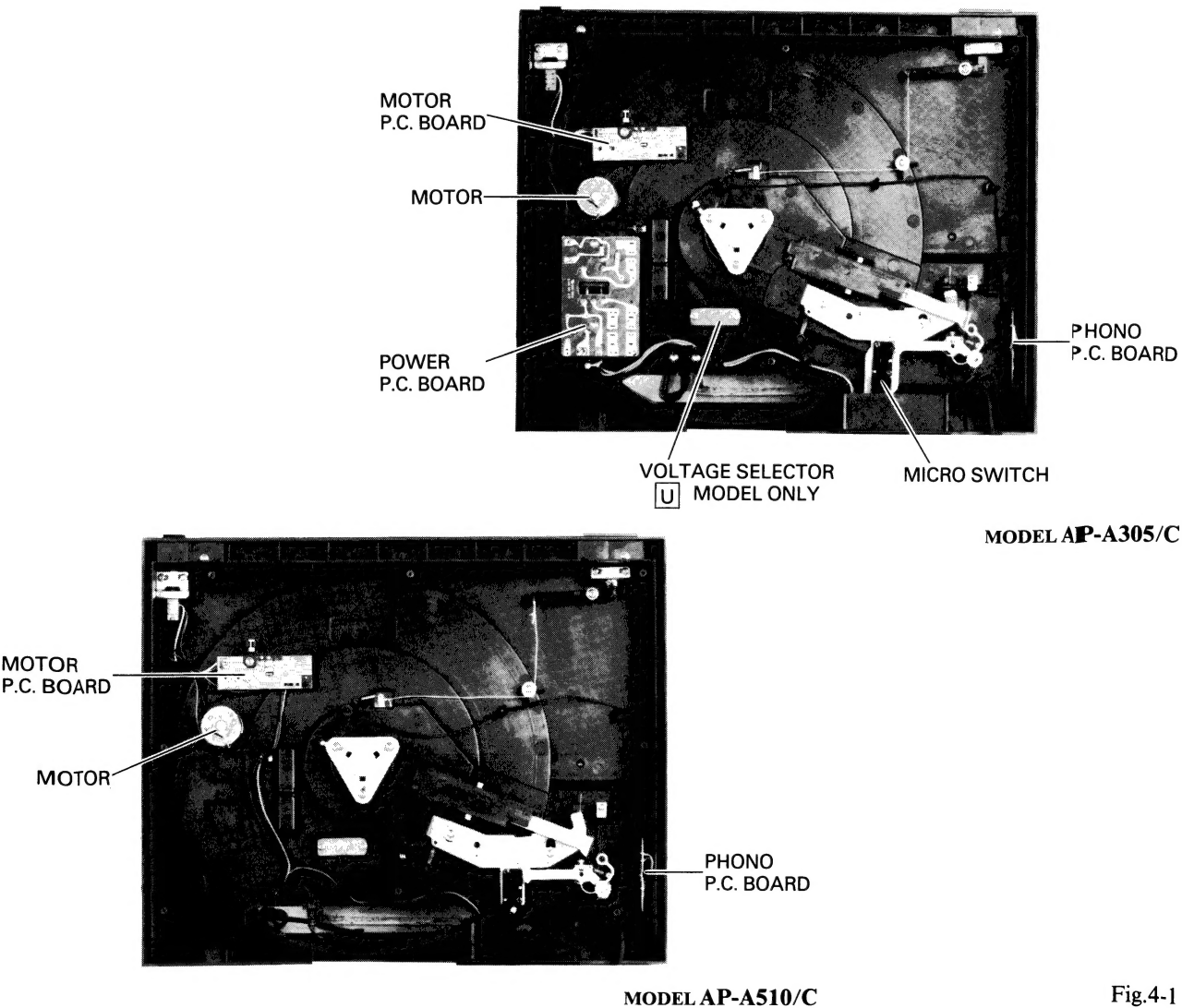


Fig.4-1

## V. ADJUSTMENT

### 1. SPEED ADJUSTMENT (Refer to fig. 5-1)

- (1) Set the speed selector to 33-1/3 rpm.
- (2) Play back the test record (1000Hz 33-1/3 rpm), and adjust VRI so that the speed is 1000Hz.
- (3) Set the speed selector to 45 rpm.
- (4) Play back the test record (1000Hz 45 rpm), and adjust VR2 so that the speed is 1000Hz.

**NOTE:** This speed adjustment should be adjust 33-1/3 rpm position first then adjust 45 rpm next.

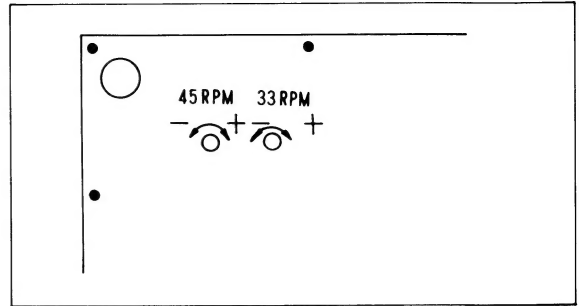


Fig.5-1

### 2. AUTO RETURN ADJUSTMENT (Refer to Fig. 5-2)

- (1) If the Tone Arm returns to early or does not return at all, Open the Bottom cover and adjust the auto return point as follows.  
(The location of auto return is within 54-64mm from the center spindle.)
- (2) Adjust the Cam in the hole located at the right side of Tone Arm after locking Tone Arm to the ARM REST.
  - a) Counter clock wise: Auto return point to the out side of record.
  - b) Clock wise: Auto return point to the center of record.

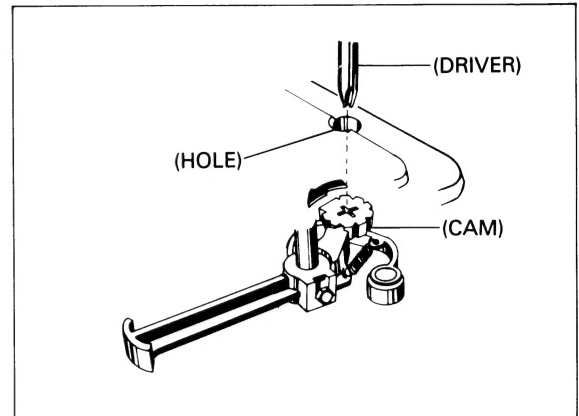


Fig. 5-2

### 3. PICK-UP HEIGHT ADJUSTMENT

All models include AUTOMATIC RETURN at the end of a record, actuated by levers and cams.

The distance between pickup stylus and top surface of a record in the arm return mode is typically 5/32-15/32 inch (4-12mm).

Adjustment of this elevation is accomplished by means of cam screw (see Fig. 5-3).

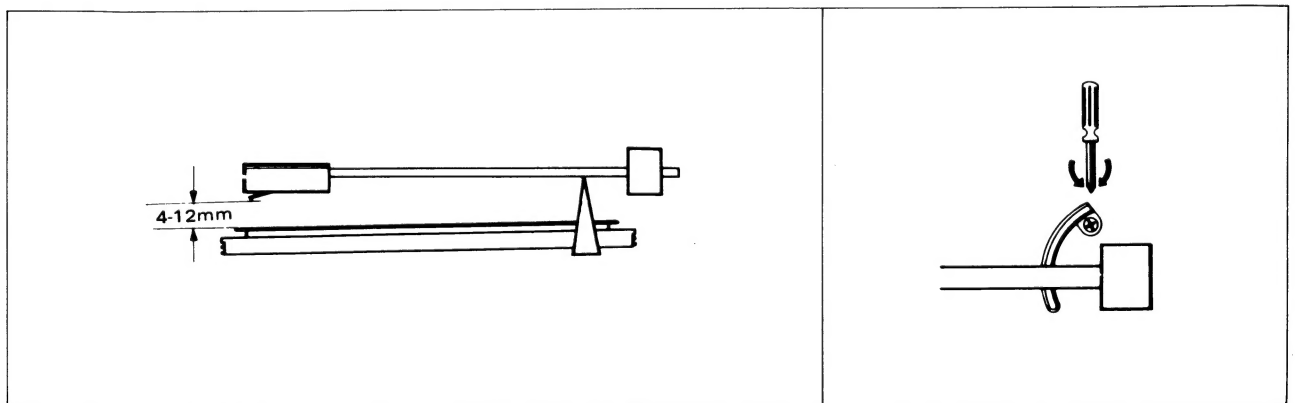
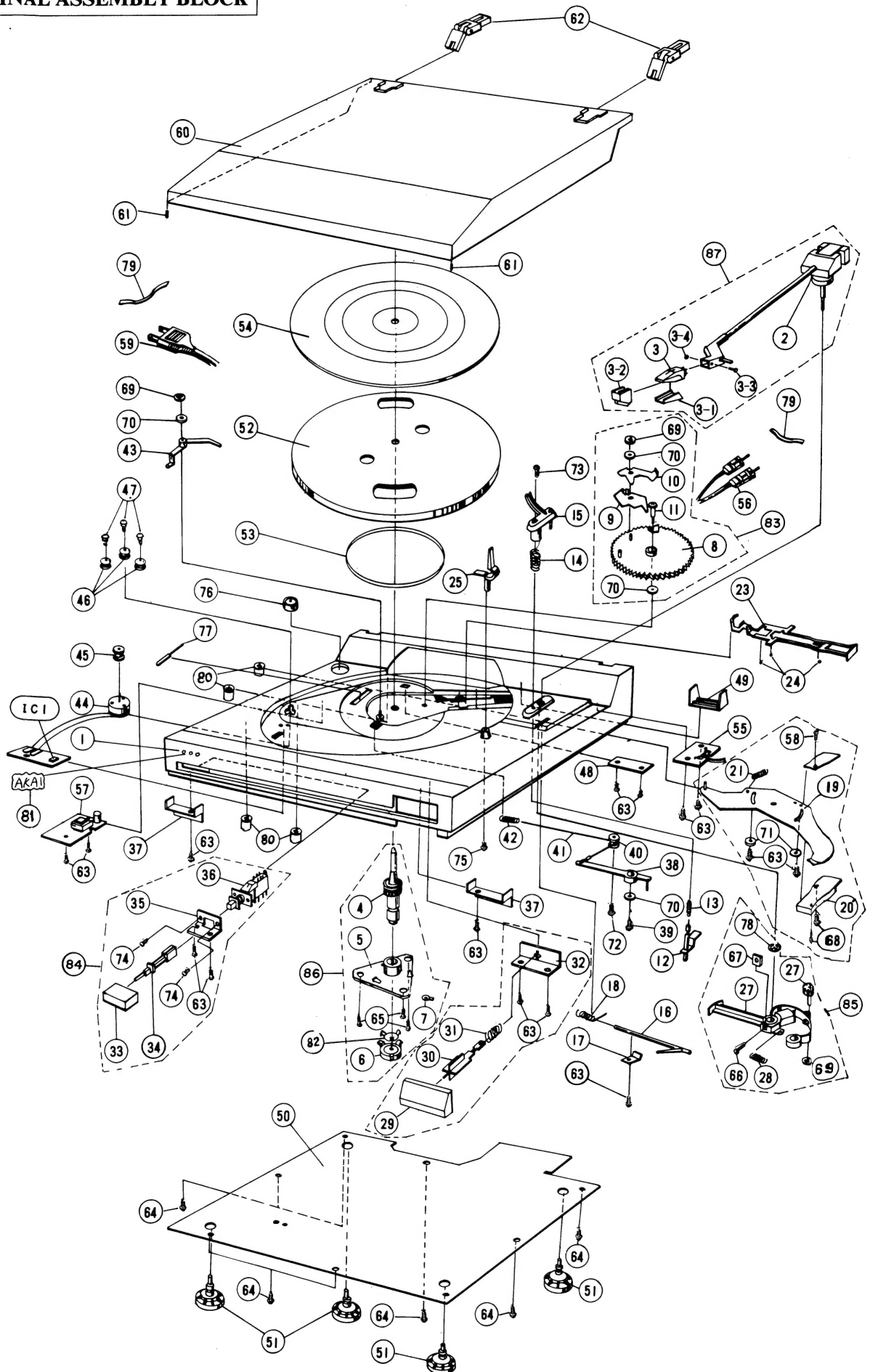


Fig. 5-3

# VI. PARTS LIST

## FINAL ASSEMBLY BLOCK



**MODEL AP-A510/C**

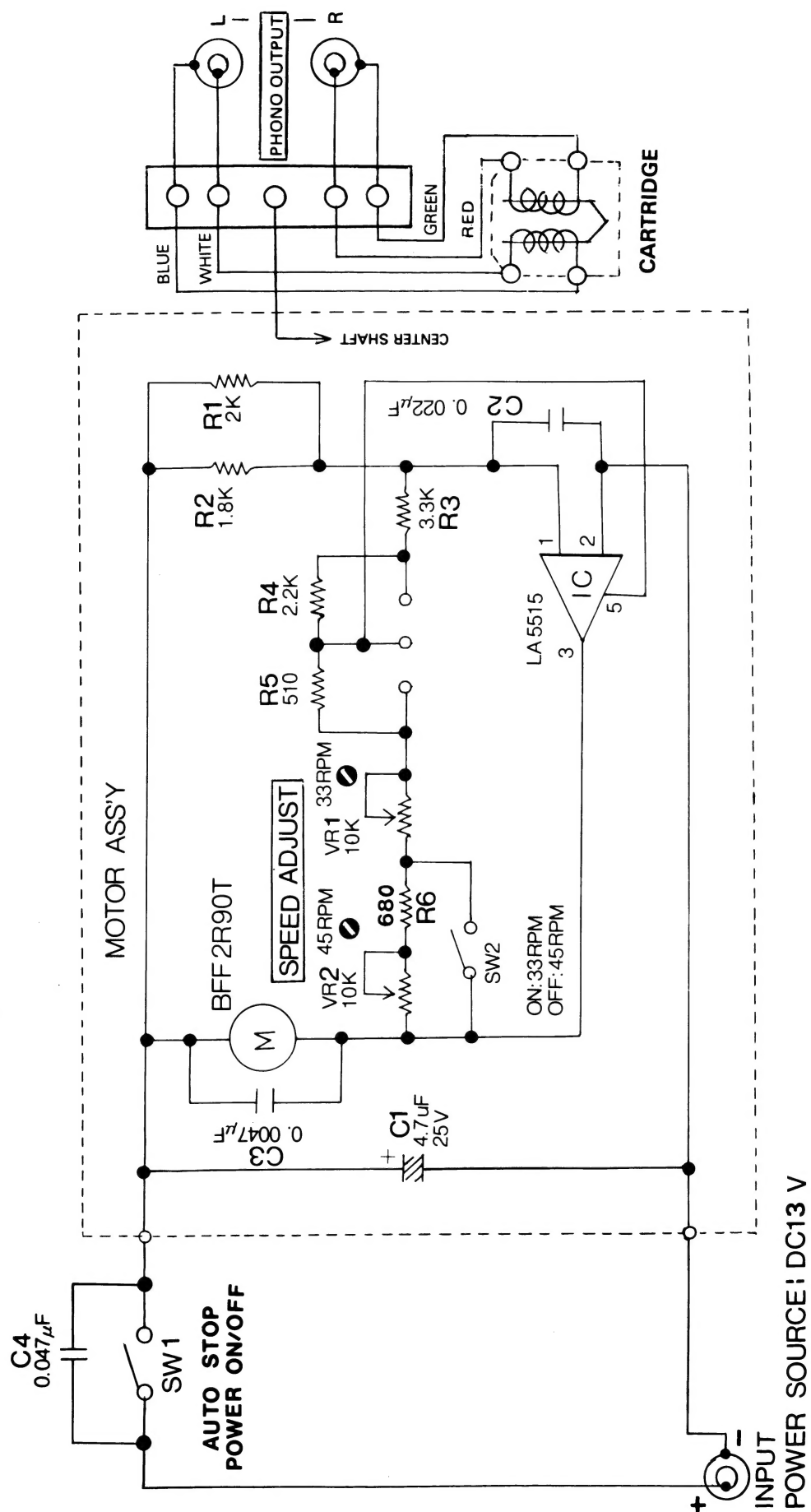
REF. NO.	PART-NO.	DESCRIPTION	NOTES
1-15	TP-720081	ELEVATION ARM	
1-20	ES-718344	SW MICRO AH-4700	
1-24	MV-269965	BALL 400STL	
1-25	TP-720080	ARM STAND	
1-44	BM-718340	MOTOR BLK AP-M300	
1-51	SA-720079	FOOT	
1-53	MB-718346	BELT CR-WRT AP-M300	
1-56	EW-718553	CORD PHONO AP-A150	
1-59	EW-718349	CORD POWER DC AP-M300	
1-60	BC-718549	DUST COVER ASSY AP-A150	
1-62	TP-713552	HINGE ASSY AP-A150	
1-83	TP-720064	MAIN GEAR BLK AP-M512-CB	
1-84	ES-718551	SPEED SW ASSY AP-A150	
1-85	TP-720073	FEED ARM ASSY AP-A510	
1-86	TP-720075	SPINDLE ASSY AP-A150	
1-87	TP-713550	TONE ARM ASSY AP-A150	
1-IC1	EI-720069	IC LA5515	

**MODEL AP-A305/C**

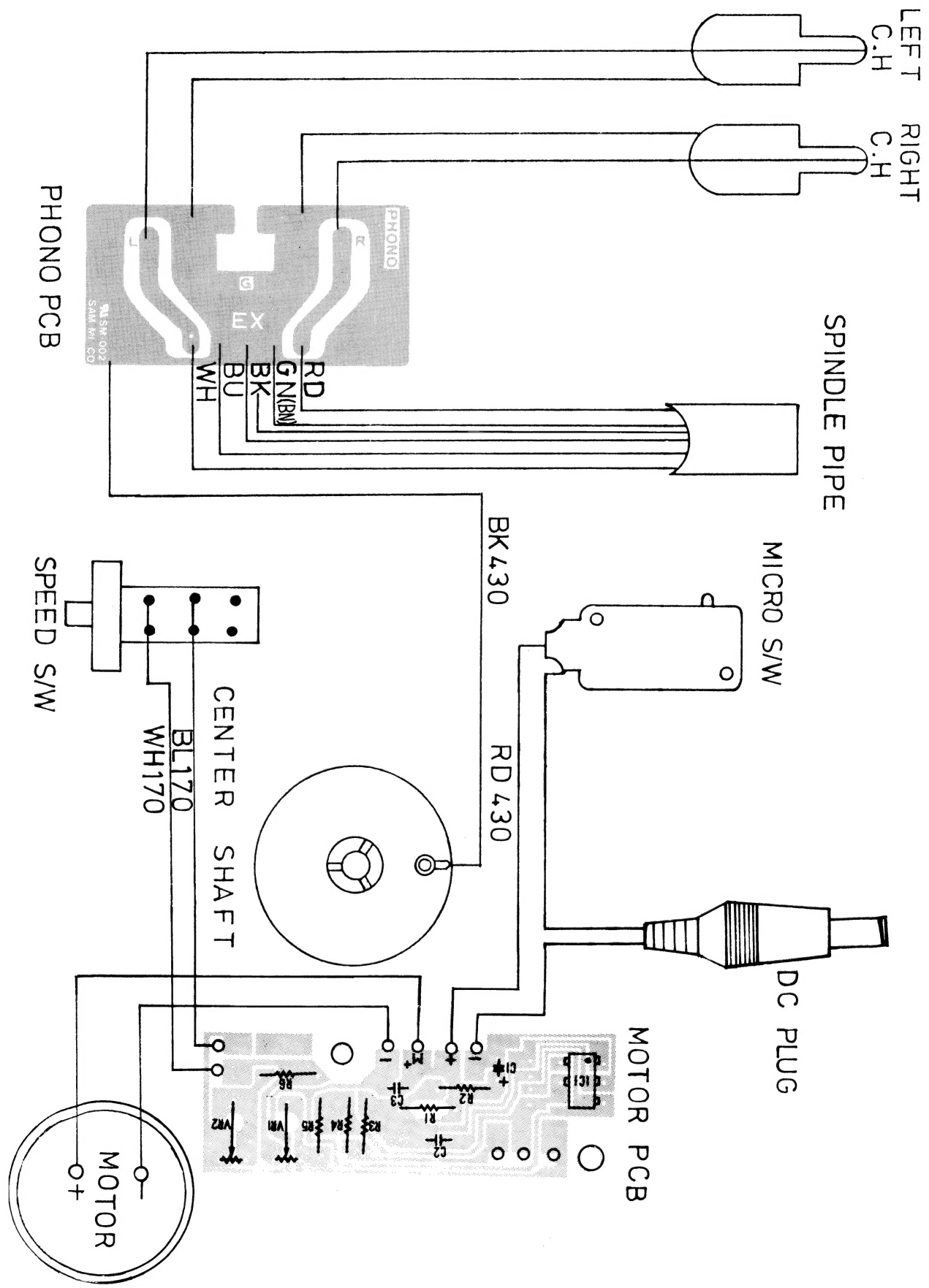
REF. NO.	PART-NO.	DESCRIPTION	NOTES
1-15	TP-720081	ELEVATION ARM	
1-20	ES-718554	SW MICRO AH-47009	
1-24	MV-269965	BALL 400STL	
1-25	TP-720080	ARM STAND	
1-44	BM-718340	MOTOR BLK AP-M300	
1-51	SA-720079	FOOT	
1-53	MB-718346	BELT CR-WRT AP-M300	
1-56	EW-718568	CORD PHONO AP-A101	
1-59	EW-718564	AC CORD KKP-10	
1-60	BC-718549	DUST COVER ASSY AP-A150	
1-62	TP-718552	HINGE ASSY AP-A150	
1-83	TP-720064	MAIN GEAR BLK AP-M512-CB	
1-84	ES-718551	SPEED SW ASSY AP-A150	
1-85	TP-720078	FEED ARM ASSY AP-A510	
1-86	TP-720075	SPINDLE ASSY AP-A150	
1-87	TP-718550	TONE ARM ASSY AP-A150	
1-F1	EF-339905	△ FUSE SEMKO T 250V 200MA	
1-D901	ED-511097	△ D SILICON 1N4001 50/1.0A	
1-T901	BT-718559	△ TRANS POWER BM-3202U	
1-IC1	EI-720069	ICLA5515	

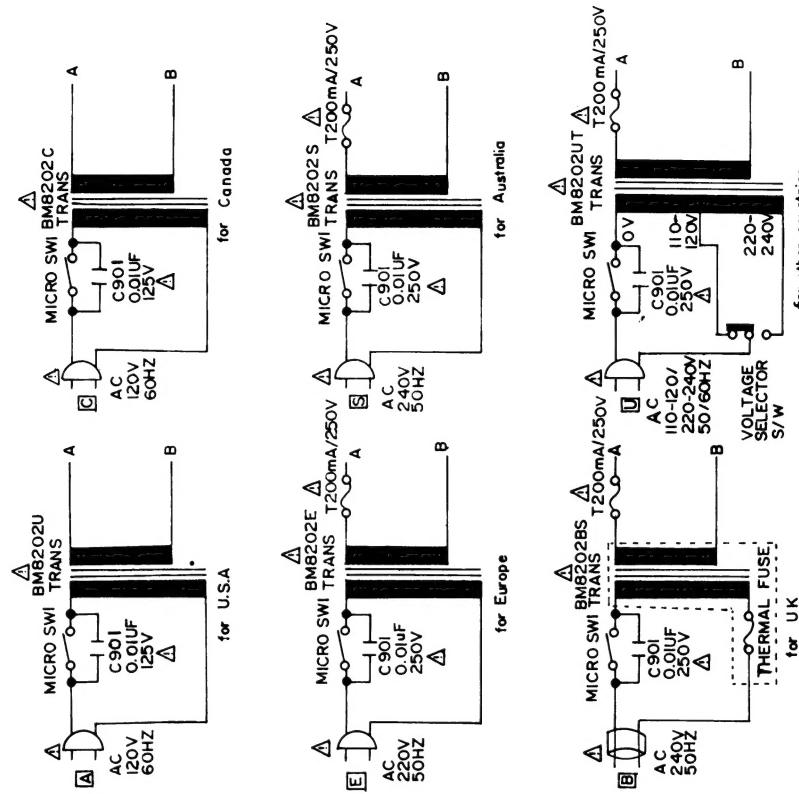
## VII. SCHEMATIC DIAGRAM

MODEL AP-A510/C









WARNING:  $\Delta$  INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.  
 AVERTISSEMENT:  $\Delta$  IL INDIQUE DES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMENDEES.

